

ABSTRACT OF THE DISCLOSURE

A mount manager and supporting data structures enable automatic identification and re-establishment of logical volumes on non-removable storage devices in a computer system across multiple reboots and reconfigurations. The mount manager generates a redirected name for a new logical volume when a unique volume identifier is presented to the mount manager by the operating system. The mount manager stores the unique volume identifier and the associated redirected name in a persistent mount manager data structure. The mount manager establishes a symbolic link between the persistent redirected name, which is used by higher layers of the operating system and user applications to address the logical volume, and a non-persistent device name used by the operating system. During the boot process, the mount manager uses the data structure entries identified by the unique volume identifiers of the arriving logical volumes to reconstruct the symbolic links so that references to the redirected name will resolve to the correct non-persistent device name. When the system undergoes physical reconfiguration, the mount manager associates an existing redirected name to a different non-persistent device name if the unique volume identifier is present in the data structure. In this fashion, logical volumes can be removed and restored in the computer without the knowledge of higher layers of the operating system and user applications. Optionally, the mount manager builds an in-memory data structure from the persistent data structure to increase the speed of the identification process.